

Notice of Allowability

Application No.

10/607,976

Applicant(s)

MASUI ET AL.

Examiner

Michael Kornakov

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/28/2005.
2. ☒ The allowed claim(s) is/are 15 and 17-21.
3. ☒ The drawings filed on 30 June 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/887,141.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/24/03, 06/15/04, 10/09/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. D. Longo, esq., on 04/28/2005.

The application has been amended as follows:

In claim 15 after the words "a control mechanism configured to control operations of the first to the third nozzle and the pure water heating mechanism" insert ---; and an open/close valve provided between the branch line and the pipe, wherein the control mechanism controls the open/close valve to interrupt emission of hot water from the third nozzle by opening the open/close valve to lower the pressure in the pipe---.

Cancel claim 16

In claim 17 replace the number "16" after the word "claim" with the number ---15--

Replace the current Abstract with the following:

--- A substrate cleaning apparatus is provided that includes a cleaning cup for receiving a to-be-cleaned substrate, a table in the cleaning cup, a first, second, and third nozzles, a pure water heating mechanism configured to supply hot pure water, a branch line, a control mechanism, and an

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open/close valve, provided between the branch line and the pipe, wherein the open/close valve is configured to interrupt emission of hot water from the third nozzle by opening the open/close valve to lower the pressure in the pipe.---

In the specification, page 1, line 9, after the words "by reference." insert ---This application is a divisional of U.S. 09/887,141, filed 06/25/2000, now U.S. Patent 6,632,289.

Allowable Claims

2. Claims 15, 17-21 are allowable over the prior art of record.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

The closest prior art of record are JP2000-181072 and JP10-189432.

JP'072 teaches liquid treating apparatus, which comprises a cleaning tank, a number of nozzles configured to supply different processing liquids, among them hot water, to the substrate to be treated in the cleaning tank, a pressure control valve, positioned on the pipe line between a nozzle for supplying hot water and a hot water tank, the said valve is capable of controlling the pressure in the pipe. The teaching of JP'072 does not anticipate or suggest fairly positioning the pressure valve on a branch line, connected to the intermediate portion of the pipe, and a control mechanism, wherein the valve is controlled by a control mechanism to opening/closing the valve to

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lower the pressure in the pipe and regulate emission of hot water from the water supply nozzle.

JP'432 teaches semiconductor wafer treating apparatus, which comprises two washing containers, each having a wafer support and nozzles for applying pure hot water to the wafer surface; water heater; a tubing extended from the water heater; two pipe lines extended from the tubing, the said pipe lines equipped with valves for supplying heated water to respective nozzles, positioned in the each washing container; a controller, configured to control operation of respective nozzles by opening or closing the respective valve. The teaching of JP'432 does not anticipate or suggest fairly an apparatus with a controller, capable of simultaneous supply of hot water to nozzles, positioned in different washing containers. JP'432 also does not anticipate or suggest fairly a branch line, which is connected to a respective pipe line, the said branch line having a separate valve, controlled by a controller, capable of opening/closing the separate valve to lower the pressure in the tubing.

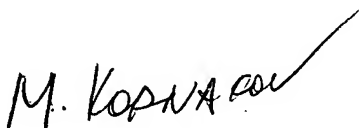
No other prior art that anticipates or suggests fairly the substrate cleaning apparatus with combination and specificities of structural elements as instantly claimed has been located as of the date of this office action. Therefore, claims 15, 17-21 are allowed over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M. Kornakov", with a long, sweeping horizontal stroke extending to the right.

Michael Kornakov
Primary Examiner
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04/29/2005